

Weapons of Mass Destruction: Current Nuclear Proliferation Challenges

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In 1965, I met Robert Kennedy while working in Washington. A small group of interns listened in rapt attention as he explained how close we were to the end of civilization during the Cuban Missile Crisis. I will never forget how he emphasized that the challenge of eliminating nuclear weapons before they eliminate us is the litmus test for humanity. Success or failure will determine our moral standard and our capacity to be led by reason and law to security, or to oblivion through fear, the quest for power, and apathy.

Nearly every country in the world has accepted the Nuclear Nonproliferation Treaty (NPT) as a necessary legal instrument to address this threat. While simultaneously condemning the spread of nuclear weapons, this treaty sets forth a related obligation to obtain their universal elimination. In 1995, in order to obtain the indefinite extension of the NPT, now with 188 states parties, commitments to nuclear elimination were confirmed and strengthened by the five declared nuclear weapon states – China, United States, France, Russia, and Britain. However, the nuclear weapon states with over 96% of the weapons, the United States and Russia, have not fully addressed their fundamental dilemma: they want to keep their nuclear weapons indefinitely and at the same time condemn others who would attempt to acquire them. It is as if parents were telling their children not to smoke while puffing on cigars themselves. It is simply not effective.

This incoherence in policies leads to instability in cooperation. Nothing could be more hazardous in today's world. In order to ensure that nuclear weapons do not proliferate to more states and to dangerous sub-state actors, confidence in the restraint of the exercise of power by the most powerful is needed. The trust and cooperation needed for a global assault against such threats will not be effective if some states flaunt their disarmament obligations yet display a passion for nonproliferation.

I will highlight some of the incoherences that are creating instability in the nonproliferation regime, and a path to coherence that simultaneously reduces threat and strengthens nonproliferation efforts. These steps will also reveal as irrational the baiting of the US in international forums by countries hostile to US interests. The path to stability and security is a return to promoting the pursuit of collective security through the rule of law. In the field of nuclear weapons, this translates – among other things - into fulfilling the existing legally mandated disarmament responsibilities that remain unaddressed by the nuclear weapon states. It is simply impractical and hypocritical for some to say that nuclear weapons are morally acceptable for them to possess and even threaten to use, and evil for others to attempt to acquire.

With this in mind, allow me to address the perception, common in Washington and reflected in the Subcommittee's questions, that the NPT is failing. Looking at the NPT's good record over the past three and one-half decades, it is hard to understand the basis for the perception. It is true that three states that stayed outside the treaty from its inception in 1970 have acquired arsenals, Israel, India, and Pakistan. This is unfortunate, but it is also a problem that predated the NPT.¹

¹ In the case of India, facing a Chinese arsenal, it made clear during NPT negotiations that a process of global elimination of nuclear weapons would be required for it to forgo the option of acquiring its own. Given that India's traditional commitment to nuclear disarmament dates back to the days of Gandhi and Nehru, I am convinced that India, as it repeatedly says in international forums, would participate in a disarmament process. The United States and India are now seeking to create an arrangement under which India would accept safeguards on civilian but not military nuclear facilities in return for access to civilian nuclear fuel and technology. While the proposed deal would partially engage India in the nonproliferation system, it undermines a core bargain of the NPT: that countries renouncing nuclear weapons are promised access to peaceful uses of nuclear technology, and would indirectly augment India's capability to

In contrast to these three, other states have changed their policies over time, renounced nuclear weapons and joined the treaty. For example, South Africa relinquished its small arsenal and Brazil and Argentina gave up weapons-relevant programs. China and France accepted the NPT disarmament obligation in joining the treaty as declared nuclear weapon states in 1992. The vast majority of states have complied with the obligation of non-acquisition. Serious efforts to acquire nuclear weapons in violation of the treaty are known to have occurred only in a handful of cases, Iraq and Libya, where programs have been reversed, and North Korea.

Thus the immediate concern over the spread of nuclear weapons comes down to two countries, admittedly problematic cases, North Korea and Iran. The North Korean problem in a way is a Cold War legacy. North Korea, as well as Iran, has also recently been the target of a U.S. policy of regime change, a policy at odds with the overriding objective of preventing nuclear weapon acquisition. It should be a matter of the highest priority to bring this chapter of history to a close and to achieve a denuclearized Korean peninsula. Whether a country is rational or irrational, direct threats to its security ensure failure in disarmament negotiations. (Please note the Gwangju Declaration issued under the leadership of former South Korean President Kim Dae-jung at a recent Nobel Peace Laureates summit, included in Appendix B.)

It is also urgent to reach a negotiated end to the ongoing confrontation with Iran over its uranium enrichment program. Should Iran achieve a weapons capability over the next five to ten years, or go further and acquire weapons at some point in the future, other states in the region will face enormous pressure to follow suit. The Weapons of Mass Destruction Commission has identified elements of a solution including a freeze on enrichment and reprocessing in the region as a step towards a WMD-free zone.² Other negotiated measures should be examined. Given Iran's attachment to its enrichment program for reasons for national pride if no other, a deal may regrettably need to include tightly supervised research activities located in that country. Appendix A identifies regime management reforms whose need is demonstrated by the experience with Iran.

The NPT Bargain: Recent Developments

To summarize: the NPT has a remarkable record of preventing the spread of nuclear weapons, but is now facing multiple challenges: regional crises in the Middle East and Northeast Asia; the spread of nuclear fuel cycle technology; and the imperative of progress on fulfilling disarmament commitments to create the reciprocity that will make the entire regime viable. In the remainder of my testimony, I want to concentrate on the last point. A good understanding requires a brief review of the history of the NPT.

The basic bargain underlying the text completed in 1968 was this: In exchange for a commitment from the non-nuclear weapons states not to acquire nuclear weapons and to submit

produce fissile materials for weapons. It is therefore unacceptable as currently framed. Minimal criteria for approval of the deal by the U.S. Congress should be entry into force of a verified Fissile Materials Cut-off Treaty and the Comprehensive Nuclear-Test-Ban Treaty as well as India's formal acceptance of the NPT obligation of good-faith negotiation of cessation of arms racing and nuclear disarmament. The need to prevent arms racing in South Asia is highlighted by recent reports that Pakistan is constructing a new plutonium production reactor and the announcement that the United States is going ahead with the long-blocked sale of F-16 fighter aircraft to Pakistan.

² Weapons of Mass Destruction Commission, Final Report, *Weapons of Terror: Freeing the World of Nuclear, Biological, and Chemical Arms* (Stockholm, June 1, 2006) ("*Weapons of Terror*") 71-72.

their peaceful nuclear activities to monitoring to verify compliance with the non-acquisition commitment (Article II), the NPT nuclear weapon states pledged to engage in disarmament negotiations aimed at the elimination of their nuclear arsenals (Article VI) and promised the non-nuclear-weapon parties unfettered access to peaceful nuclear technologies (e.g. nuclear power reactors and nuclear medicine; Article IV).³ During the negotiations at its creation, several prominent non-nuclear weapons states – Germany, Italy and Sweden, for example – would not permit the treaty to be permanent and ensured that it would be reviewed after 25 years and either be extended for a fixed period, be indefinitely extended (Article X), or lapse. At the 1995 Review and Extension Conference, many states were extremely dissatisfied with the progress on disarmament of the nuclear weapons states – U.S., Russia, U.K., France, and China – and argued that they would not accept the inequity of a dual global system of nuclear haves and have-nots. They demanded and obtained a bargain. It contained a Statement of Principles and Objectives for Nuclear Nonproliferation and Disarmament,⁴ which politically, if not legally, conditioned the indefinite extension of the treaty, pledging to:

- complete a Comprehensive Nuclear-Test Ban Treaty by the end of 1996
- reaffirm the commitment to pursue nuclear disarmament
- commence negotiations on a treaty to stop production of nuclear bomb materials
- encourage the creation of nuclear weapons free zones
- vigorously work to make the treaty universal by bringing in Israel, Pakistan and India
- enhance IAEA safeguards and verification capacity
- reinforce negative security assurances already given to non-weapons states against the use or threat of use of nuclear weapons against them

The bargain to extend the treaty centered on a strengthened review process with near yearly preparatory conferences and a rigorous review every five years to ensure the promise as set forth in the Principle and Objectives:

“The determined pursuit by the nuclear-weapon states of systematic and progressive efforts to reduce nuclear weapons globally, with the ultimate goal of eliminating those weapons.”

The 1995 re-commitment to and elaboration of the NPT nuclear disarmament obligation was reinforced by the 1996 advisory opinion of the International Court of Justice. Interpreting Article VI of the NPT and other international law, the Court unanimously held: “There exists an obligation to pursue in good faith and bring to a conclusion negotiations on nuclear disarmament in all its aspects under strict and effective international control.”⁵

The 2000 Review Conference successfully reached a consensus on 13 Practical Steps to advance the commitments to lower the salience of nuclear weapons in policies, reinforce

³ See Thomas Graham, Jr., *Commonsense on Weapons of Mass Destruction* (2004) 10.

⁴ 1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, Decision 2, “Principles and Objectives for Nuclear Non-Proliferation and Disarmament,” *Final Document*, Part I, NPT/CONF.1995/32, Annex: Access at <http://disarmament2.un.org/wmd/npt/1995nptrevconfdocs.html>.

⁵ International Court of Justice, “Legality of the Threat or Use of Nuclear Weapons,” Advisory Opinion of 8 July 1996, *ICJ Reports* (1996): 226, para. 105(2)F. Online at <http://www.icj-cij.org/icjwww/icasess/iunan/iunanframe.htm>.

nonproliferation measures, and move toward the elimination of nuclear weapons. All 187 States Parties agreed on the following measures:⁶

1. Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty (CTBT): The importance and urgency of signatures and ratifications, without delay and without conditions and in accordance with constitutional processes, to achieve the early entry into force of the CTBT.

2. Holding the Line Against Testing: A moratorium on nuclear-weapon-test explosions or any other nuclear explosions pending entry into force of the CTBT.

3. Fissile Material Cut-off Treaty (FMCT): The necessity of negotiations in the Conference on Disarmament on a non-discriminatory, multilateral and internationally and effectively verifiable treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices. The Conference on Disarmament is urged to agree on a program of work which includes the immediate commencement of negotiations on such a treaty with a view to their conclusion within five years.

4. Negotiations on Nuclear Disarmament: The necessity of establishing in the Conference on Disarmament an appropriate subsidiary body with a mandate to deal with nuclear disarmament. The Conference on Disarmament is urged to agree on a program of work which includes the immediate establishment of such a body.

5. Irreversibility: The principle of irreversibility to apply to nuclear disarmament, nuclear and other related arms control and reduction measures.

6. Commitment to Elimination: An unequivocal undertaking by the nuclear-weapon States to accomplish the total elimination of their nuclear arsenals leading to nuclear disarmament to which all States parties are committed under Article VI.

7. Verified Reductions: The early entry into force and full implementation of Strategic Arms Reduction Treaty (START) II and the conclusion of START III as soon as possible while preserving and strengthening the Anti-Ballistic Missile (ABM) Treaty as a cornerstone of strategic stability and as a basis for further reductions of strategic offensive weapons, in accordance with its provisions.

8. Control of U.S./Russian Excess Fissile Materials: The completion and implementation of the Trilateral Initiative between the United States of America, the Russian Federation and the International Atomic Energy Agency.

9. Progress by Nuclear Weapons States: Steps by all the nuclear-weapon States leading to nuclear disarmament in a way that promotes international stability, and based on the principle of undiminished security for all:

- Further efforts by the nuclear-weapon States to reduce their nuclear arsenals unilaterally.
- Increased transparency by the nuclear-weapon States with regard to the nuclear weapons capabilities and the implementation of agreements pursuant to Article VI and as a voluntary confidence-building measure to support further progress on nuclear disarmament.
- The further reduction of non-strategic nuclear weapons, based on unilateral initiatives and as an integral part of the nuclear arms reduction and disarmament process.
- Concrete agreed measures to further reduce the operational status of nuclear weapon systems. The
- A diminishing role for nuclear weapons in security policies to minimize the risk that these weapons ever be used and to facilitate the process of their total elimination.

⁶ 2000 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Final Document*, Vol. I, NPT/CONF.2000/28, Part I: 14-15. Access at <http://disarmament.un.org/wmd/npt/finaldoc.html>. The headings in bold in the text are provided for convenience and are not part of the Final Document.

- The engagement as soon as appropriate of all the nuclear-weapon States in the process leading to the total elimination of their nuclear weapons.

10. Excess fissile materials under IAEA control: Arrangements by all nuclear weapon States to place, as soon as practicable, fissile material designated by each of them as no longer required for military purposes under International Atomic Energy Agency (IAEA) or other relevant international verification and arrangements for the disposition of such material for peaceful purposes, to ensure that such material remains permanently outside of military programs.

11. General and Complete Disarmament: Reaffirmation that the ultimate objective of the efforts of States in the disarmament process is general and complete disarmament under effective international control.

12. Reporting: Regular reports, within the framework of the NPT strengthened review process, by all States parties on the implementation of Article VI and paragraph 4 (c) of the 1995 Decision on "Principles and Objectives for Nuclear Non-Proliferation and Disarmament", and recalling the Advisory Opinion of the International Court of Justice of 8 July 1996.

13. Verifying: The further development of the verification capabilities that will be required to provide assurance of compliance with nuclear disarmament agreements for the achievement and maintenance of a nuclear-weapon-free world.

This is a comprehensive and sophisticated agenda that provides guidelines for implementation in good faith of the Article VI disarmament obligation. Not every measure is specifically required for good-faith fulfillment of Article VI, but some elements are essential. Most of the world's governments – including U.S. allies – agree that the key commitments include application of the principles of transparency, irreversibility, and verification of reduction and elimination of nuclear weapons; the necessity of a diminishing role for nuclear weapons in security policies; the reduction of the operational status of nuclear weapons systems; the entry into force of the CTBT; and negotiations on a Fissile Materials Cut-off Treaty.⁷

However, since 2000, the United States has backtracked on key commitments made in the Practical Steps, notably the CTBT; negotiation of a *verified* FMCT; the START process and the ABM Treaty. The 2002 bilateral Strategic Offensive Reductions Treaty (SORT) with Russia fails to apply the principles of transparency, verification, and irreversibility. Furthermore, it could be argued that SORT fails to diminish the role of nuclear weapons in security policies, a duty consistent with NPT pledges. The Administration's position is that the 2000 commitments are only "political," that circumstances have changed, and that compliance with Article VI is demonstrated by a four-fold reduction in the size of its arsenal since the Cold War. What is at stake here is not just a U.S.-Russian issue. The Practical Steps, adopted at the 2000 NPT Review Conference, represent an international consensus on the means for compliance with Article VI. Good faith requires at a minimum that the United States put forward alternative means for compliance. This the United States has not done. It is simply not enough to say that the U.S. and Russian arsenals have been reduced when their potential to destroy the world remains the same.

Without active U.S. leadership, hopes for progress on nuclear nonproliferation and disarmament were dashed from the outset of the 2005 Review Conference, held at the UN in May

⁷ Evidence of the near-consensus is provided by UN General Assembly resolutions, notably the 2005 "Renewed Determination" resolution sponsored by Japan and nine other countries from both the North and South. It received the support of the vast majority of states, with 162 countries voting for it and only two against, the United States and India, with seven abstentions. A/RES/60/65; access at <http://www.un.org/Depts/dhl/resguide/r60.htm>.

2005. The states parties were unable to even generate a timely working agenda and 15 out of 20 days were squandered on procedural battles. The procedural squabbles masked real debate on substantive political differences. The capacity to make substantive progress on disarmament or nonproliferation was thwarted despite efforts of the world's best diplomats. The 2005 agenda was stalled along several fault lines. The United States would not permit the commitments already made under the treaty review process to be the basis for a working agenda and focused on the proliferation threats posed by Iran and North Korea; Egypt demanded recognition of previous commitments, in particular regarding making the treaty universal; Iran baited the nuclear weapon states on their failure to make progress on disarmament, specifically the United States for its research on modified or new-design warheads with new military capabilities. In the end, no consensus document was generated.

The U.S. unwillingness to specifically respond to demands to have its previous commitments reviewed placed the very integrity of the institution of the NPT at risk. For if commitments made yesterday need not be held to account today, why should any commitments made to the body of the NPT ever be taken seriously? Grave harm was done to international law at the 2005 Review Conference. Universally respected nonproliferation goals were not seriously negotiated, not because of a poverty of valid proposals, but because of a failure of political will. Effective means of addressing threats posed by States leaving the treaty, or, like Iran, using the treaty to develop nuclear energy with the potential for using technical advances and fissile materials to develop weapons, as well as the failure of NWS to fulfill their pledges to take practical steps toward elimination were not achieved.

All too many diplomats expressed concern that the U.S. was not taking international cooperative security under the rule of law seriously enough. In that regard one cannot overlook a statement made in the National Defense Strategy of the United States released in March 2005 by the Defense Department. In the section addressing the Changing Security Environment, there is a new definition of vulnerability, very much at odds with U.S. traditional advocacy of promoting law and diplomacy as a means of achieving security:

“Our strength as a nation state will continue to be challenged by those who employ a strategy of the weak using international fora, judicial processes, and terrorism.”

Without U.S. leadership toward international fora and judicial process embodied in arms control agreements and other instruments of cooperative security, even the Heads of State of the world will remain stymied to such an extent that they will simply be unable to address proliferation issues through diplomacy. On September 13, 2005, in addressing the press regarding the September 2005 Summit at the UN of Heads of State in reference to their Final Statement, Secretary-General Kofi Annan said:

“The big item missing is non-proliferation and disarmament. This is a real disgrace. We have failed twice this year: we failed at the NPT [Review Conference], and we failed now.”

This institutional deadlock has arisen from a profound failure of political will to work cooperatively. This diminution of utilization of diplomacy and law renders the reliance on force and war more likely. Proliferation is unacceptable, indeed. But is counter-proliferation, such as the war in Iraq, the first counter-proliferation war, so effective?

Looking Forward

Our task now is to look forward; while we need to understand how we got to the present juncture, the issues are simply too serious to spend too much time regretting missed opportunities. Let me now, drawing on the rich history of agenda-setting in the NPT context, identify key steps that reinforce non-proliferation and disarmament.⁸

Fissile Materials Cut-off Treaty

An FMCT would permanently end production of fissile materials, primarily separated plutonium and highly enriched uranium (HEU), for use in weapons. It would affect most directly the countries possessing nuclear weapons; NPT non-weapon states already are subject to a verified ban on diverting materials to weapons. Achievement of an FMCT would restrain arms racing involving India, China, and Pakistan, cap Israel's arsenal, and establish ceilings on other arsenals as well. A verified FMCT also would help build a stable framework for reduction and elimination of warheads and fissile material stocks; help prevent acquisition of fissile materials by terrorists; meet a key NPT commitment; and institutionalize one of the basic pillars of a nuclear weapons-free world. When negotiations on the FMCT begin, the United States should return to its long-established position that verification is imperative and feasible.⁹

Verification of reduction and elimination of nuclear arsenals

President Reagan repeatedly invoked the Russian dictum, "trust but verify." It is essential to bring the principle of verification symbolized by that dictum back to center stage. The Strategic Offensive Reductions Treaty (SORT) requires Russia and the United States each to deploy no more than 2200 strategic warheads by 2012, but includes no provisions for verification of reductions or dismantling of warheads or delivery systems, leaving each country free to retain thousands of warheads in addition to those deployed. The two countries declared that they would make use of monitoring mechanisms under START to track reductions. But START expires in 2009, and SORT does not provide any schedule for reductions prior to 2012. A high priority therefore is for the United States and Russia to agree on means to verify and make irreversible the reductions. The WMD Commission recommends negotiation of a new treaty that would further cut strategic forces and also provide for verified dismantlement of warheads withdrawn under SORT.¹⁰ In negotiating SORT, the Bush administration rejected a detailed agreement spelling out transparency and verification measures on the grounds that Cold War-style arms control is no longer necessary and that the United States has no interest in determining together with Russia the size and composition of the two countries' arsenals. This approach overlooks that Cold War or no, the two countries need to regulate their nuclear relationship; "partnership" is not necessarily forever. Further, accounting

⁸ See Middle Powers Initiative, "Fulfilling the NPT Bargain for Disarmament and Non-Proliferation: *Next Steps*," Briefing Paper for the Third Meeting of the Article VI Forum, Ottawa, September 28-29, 2006.

⁹ The current U.S. position is that extensive verification mechanisms could compromise the core national security interests of key parties, would be so costly that many countries would be hesitant to implement them, and still would not provide high confidence in the ability to monitor compliance. However, the International Panel on Fissile Materials and the Weapons of Mass Destruction Commission have persuasively refuted the argument against verifying the FMCT. See International Panel on Fissile Materials, *Global Fissile Materials Report 2006*, pp. 43-49, online at http://www.fissilematerials.org/ipfm/site_down/ipfmreport06.pdf; *Weapons of Terror* at 104.

¹⁰ *Weapons of Terror* at 93.

for warheads and verifying reductions is essential to achieving marginalization and elimination of nuclear weapons globally.

Verification is necessary not only for U.S. security interests. Verification also follows from the truth that the United States cannot be secure in an insecure world. Verification is needed to bring greater security to the rest of the world because the rest of the world is properly concerned with the efficacy of the disarmament and arms reduction efforts of the United States and Russia.

In working towards a nuclear weapons-free world, many tools exist for effective verification and monitoring, especially with respect to declared facilities, warheads, and fissile materials, as shown by studies this decade undertaken by the United Kingdom¹¹ and the U.S. National Academy of Sciences.¹² However, achieving confidence that reduction and elimination of arsenals has been implemented remains challenging, principally due to the possibility of hidden warheads, stocks of fissile materials, or capabilities. The National Academy of Sciences found that confidence would increase based on monitoring programs undertaken on an ongoing, long-term basis in an atmosphere of transparency and cooperation.¹³ An implication is that verification and transparency measures need to be implemented beginning *now*, above all regarding U.S.-Russian stocks and reductions. More broadly, all nuclear-armed states must initiate processes to apply the principles of verification, transparency, and irreversibility to reduction and elimination of their arsenals. Declarations of fissile materials contained in military stocks and warheads, as recommended by the International Panel on Fissile Materials, is one of the first steps that could be taken. Countries with nuclear weapons owe the rest of the world greater proof of compliance with the disarmament obligation. To that end, verification processes should involve international monitoring.

Reduction of the operational status of nuclear forces

The United States is now estimated to have more than 1600 warheads ready for delivery within minutes of an order to do so, and Russia more than 1000 warheads similarly ready for launch.¹⁴ It should be an absolute scandal that, every moment of every day, the two countries remain locked in a Cold War-style nuclear standoff. Non-governmental experts have explained that the standoff can be defused through separation of warheads from delivery systems and other measures that lengthen the time required for a nuclear launch, from days to weeks to months.¹⁵ An accompanying step is the elimination of the launch-on-warning option that requires nuclear forces to be on hair-trigger alert. The U.S. and Russia should follow the admonition of George W. Bush who said when he was a candidate for president in 2000: “The United States should remove as many weapons as possible from high-alert, hair-trigger status – another unnecessary vestige of the

¹¹ “Verification of nuclear disarmament: final report on studies into the verification of nuclear warheads and their components,” working paper submitted by the United Kingdom of Great Britain and Northern Ireland to the 2005 NPT Review Conference, NPT/CONF.2005/WP.1, and previous working papers cited therein. Online at http://www.reachingcriticalwill.org/legal/npt/RevCon05/wp/verification_UK.pdf.

¹² Committee on International Security and Arms Control, National Academy of Sciences, *Monitoring Nuclear Weapons and Nuclear-Explosive Materials: An Assessment of Methods and Capabilities* (2005). Online at <http://www.nap.edu/catalog/11265.html>.

¹³ *Id.* at 219-220.

¹⁴ See estimates by Bruce Blair, president of the Center for Defense Information, cited in John Burroughs, “The Man Who Averted Nuclear War,” *DisarmamentActivist.org*, January 19, 2006.

¹⁵ E.g., David E. Mosher, Lowell H. Schwartz, David R. Howell, and Lynn E. David, *Beyond the Nuclear Shadow: A Phased Approach for Improving Nuclear Safety and U.S.-Russian Relations* (RAND, 2003). Online at <http://www.rand.org/publications/MR/MR1666>.

Cold War confrontation. Preparation for quick launch – within minutes after warning of an attack – was the rule during the era of superpower rivalry. But today, for two nations at peace, to keep so many weapons on high alert may create unacceptable risks of accidental or unauthorized launch.”

While most urgent with respect to Russia and the United States, it is also vital that other weapon states, which to various degrees already maintain their forces in a de facto de-alerted condition, adopt and affirm de-alerting as an entrenched, declared policy and practice. De-alerting would help alleviate risks associated with mistakes, coups, attacks on nuclear weapons facilities, false warnings, unauthorized launches, hacking into command and control systems, and developments that cannot now be anticipated. Depending on the extent of its execution and verification, it would also lessen the moral corruption inherent in reliance on nuclear weapons for security and defense.

Comprehensive Nuclear-Test-Ban Treaty

After four decades of discussions and partial test ban agreements, negotiations on the CTBT were completed in 1996. Although 135 states have ratified the treaty, ten of the 44 states whose ratification is required for entry into force have yet to do so. Of the ten, three weapon-possessing states, the United States, China, and Israel, have signed but not ratified the treaty; two other weapon-possessing states, India and Pakistan, have not taken the first step of signing it; and North Korea, which may have weapons, has also not signed. The Preparatory Commission for the CTBT Organization has made great strides in developing the International Monitoring System, which will likely be completed in 2007. In a 2002 study, the U.S. National Academy of Sciences concluded that with a fully functioning monitoring system, clandestine nuclear explosions with a yield of more than one to two kilotons are detectable by technical means alone, and further found that any undetected low-yield explosions are not likely to significantly advance weapon development.¹⁶ The CTBT would help to check the spread of nuclear arms and to constrain refinement of advanced arsenals; protect the environment; and have a substantial organizational and technical infrastructure. It would be an indispensable part of the architecture of a nuclear weapons-free world. Its entry into force must remain a high priority. Also crucial is maintenance of the moratorium on nuclear test explosions that has held since the 1998 tests by India and Pakistan and continued support for the Preparatory Commission.

The United States and other states possessing nuclear arsenals should also refrain from warhead research and development. It is contrary to a central purpose of the NPT and the commitment in the Practical Steps to a diminishing role for nuclear weapons in security policies, and could lead to a resumption of testing to gain confidence in the performance of new or modified warheads. The WMD Commission stated: “If research on nuclear weapons is continued, modifications should only be for purposes of safety and security – and demonstrably so.”¹⁷ But research and development is taking place for purposes of replacing existing systems, increasing reliability over the long term, and enhancing military capabilities. France reportedly is planning the deployment of new warheads whose concept was tested in 1995-1996 on new versions of its cruise

¹⁶ Committee on Technical Issues Related to Ratification of the Comprehensive Nuclear Test Ban Treaty, National Academy of Sciences, *Technical Issues Related to the Comprehensive Nuclear Test Ban Treaty* (Washington: National Academy Press, 2002). Access online at <http://newton.nap.edu/catalog/10471.html>.

¹⁷ *Weapons of Terror* at 99.

and submarine-launched missiles.¹⁸ Russia is developing new warheads for its most recent silo-based and mobile missiles, including one involving a maneuverable reentry vehicle.¹⁹ The U.S. “reliable replacement warhead” program aims to yield modified or new-design warheads;²⁰ Britain reportedly has a similar program.²¹

Despite current Congressional intentions, the U.S. program will enable research on improvement of military capabilities. It has been described by a top official as incubating future “revitalized” scientists able to design, develop and produce a new-design warhead with “different or modified military capabilities” within three to four years of a decision to do so.²² The Department of Defense projects that four to six replacement or refurbished warheads will be deployed in about two decades, and also envisions warhead development for next-generation delivery systems.²³ Exotic changes are not necessary to achieve significant advances in capability. Under the U.S. “lifetime extension program,” the main warhead for submarine-launched missiles is being given a capacity to destroy “hard targets” with a “ground burst” by modifying a sub-system in its reentry vehicle.²⁴ To the extent that weapon states’ modernization programs are intended to and will result only in perpetuating existing military capabilities, planning and preparing for maintenance of nuclear forces for decades to come is contrary to the obligation to work in good faith for their elimination.

A diminishing role of nuclear weapons in security policies and strengthened assurances of non-use of nuclear weapons against non-weapon states

The 2000 NPT Review Conference rightly and wisely recognized that reducing the role of nuclear weapons in security postures makes the world safer now and facilitates progress in reduction and elimination of nuclear arsenals. With the exception of China, which has maintained its existing policy of no first use, none of the weapon states has complied with this commitment. France earlier this year signaled that nuclear weapons could be used against a state responsible for a large-scale terrorist attack on France.²⁵ The United States claims to be in compliance with the commitment due to development of non-nuclear means for striking enemy targets and defending against attacks (e.g., anti-missile systems). However, the increased emphasis in recent years on options for use of nuclear weapons in a widening range of circumstances makes nonsense of this claim.

¹⁸ Bruno Tertrais, “Nuclear policy: France stands alone,” *Bulletin of the Atomic Scientists* (July/August 2004) 48-55.

¹⁹ Robert S. Norris and Hans M. Kristensen, NRDC Nuclear Notebook, “Russian Nuclear Forces, 2006,” *Bulletin of the Atomic Scientists* (March/April 2006) 64-67.

²⁰ Jonathan Medalia, Congressional Research Service, *Nuclear Weapons: The Reliable Replacement Warhead Program* (updated March 9, 2006); Amb. Linton Brooks, Administrator, National Nuclear Security Administration, “The Future of the U.S. Nuclear Weapons Stockpile,” 2006 Arms Control Association Panel Discussion, January 25, 2006. Online at http://www.armscontrol.org/pdf/20060125_brooks.pdf.

²¹ Michael Smith, “Focus: Britain’s secret nuclear blueprint,” *The Sunday Times*, March 12, 2006.

²² Brooks, *supra*.

²³ Office of the Deputy Assistant to the Secretary of Defense for Nuclear Matters, “Stockpile Transformation,” <http://www.acq.osd.mil/ncbdp/nm/stockpiletransformation.html> (accessed September 16, 2006).

²⁴ Robert S. Norris and Hans M. Kristensen, NRDC Nuclear Notebook, “U.S. Nuclear Forces, 2006,” *Bulletin of the Atomic Scientists* (January/February 2006) 68-71; Greg Mello, “That Old Designing Fever,” *Bulletin of the Atomic Scientists* (January/February 2000) 51-57.

²⁵ In a January 19, 2006 speech, President Jacques Chirac said: “[N]uclear deterrence is not intended to deter fanatical terrorists. Yet, the leaders of States who would use terrorist means against us, as well as those who would consider using, in one way or another, weapons of mass destruction, must understand that they would lay themselves open to a firm and adapted response on our part. And this response could be a conventional one. It could also be of a different kind.” Online at <http://www.acronym.org.uk/docs/0601/doc06.htm>.

The classified but leaked 2001 Department of Defense Nuclear Posture Review (NPR) states that nuclear weapons will be “integrated with new nonnuclear strategic capabilities” including advanced conventional precision-guided munitions,²⁶ suggesting a view of nuclear weapons as “simply another weapon.”²⁷ It plans for an enlarged range of circumstances under which nuclear weapons could be used, notably against non-nuclear attacks or threats. It refers to contingency planning for use of nuclear weapons against Russia, China, North Korea, Iraq, Iran, Syria, and Libya, and identifies possible “immediate contingencies” requiring U.S. nuclear use including “a North Korean attack on South Korea, or a military confrontation over the status of Taiwan.” The NPR also states that nuclear weapons “could be employed against targets able to withstand nonnuclear attack, (for example, deep underground bunkers or bio-weapon facilities),” and contemplates their use in response to a biological or chemical attack.²⁸ Finally, the NPR refers to nuclear use in response to “surprising military developments” and “unexpected contingencies.”²⁹ Those new catch-all categories are virtually without limit.

The NPR was reinforced in December 2002 by a presidentially approved document, the National Strategy to Combat Weapons of Mass Destruction. It states that the United States “reserves the right to respond with overwhelming force - including through resort to all of our options - to the use of WMD [weapons of mass destruction] against the United States” and its “friends and allies.”³⁰ The reference to “all of our options” is an invocation of the nuclear option. The document also identifies preemptive military action as one means of responding to states’ acquisition of NBC weapons or capabilities, and does not exclude U.S. use of nuclear weapons in a preemptive attack. Subsequent military planning documents repeat and elaborate the formulations found in the NPR, with allusions to the option of nuclear preemptive use, and state plainly, as the National Strategy had implicitly, that nuclear weapons may be used in response to a chemical or biological attack.³¹

Recent doctrinal statements are not unprecedented. In the 1990s, as the U.S. nuclear establishment sought to establish new missions in the aftermath of the Cold War, references to options for use of nuclear weapons in “counterproliferation” missions in response to biological, chemical, and nuclear weapons use and capabilities surfaced in a variety of governmental settings.³²

²⁶ “Nuclear Posture Review [Excerpts] Submitted to Congress on 31 December 2001” (“NPR Excerpts”). Online at <http://www.globalsecurity.org/wmd/library/policy/dod/npr.htm>.

²⁷ Joseph Cirincione, Director, Non-Proliferation Project, Carnegie Endowment for International Peace, Testimony to the Senate Committee on Foreign Relations, May 16, 2002.

²⁸ NPR Excerpts; William M. Arkin, Commentary, “Secret Plan Outlines the Unthinkable,” *Los Angeles Times*, March 10, 2002; Walter Pincus, “U.S. Nuclear Arms Stance Modified by Policy Study,” *Washington Post*, March 23, 2002. Pincus wrote that the NPR “would give U.S. presidents the option of conducting a preemptive strike with precision-guided conventional bombs or nuclear weapons” against “hostile countries that threaten to use weapons of mass destruction.”

²⁹ NPR Excerpts.

³⁰ *National Strategy to Combat Weapons of Mass Destruction* (December 2002) 3.

³¹ E.g., U.S. Department of Defense, *Strategic Deterrence Joint Operating Concept* (February 2004) 32-33. Online at http://www.dtic.mil/jointvision/sd_joc_v1.doc. “Joint Operating Concepts” are part of a set of planning documents intended “to assist in the development of enhanced joint military capabilities needed to protect and advance U.S. interests.” The goal is “to realize the Chairman’s vision of achieving Full Spectrum Dominance by the Joint Force.” *Id.* at 1.

³² “The Role of Nuclear Weapons in the New World Order,” Briefing by Thomas C. Reed, Chairman of the Joint Strategic Target Planning Staff Strategic Advisory Group Deterrence Study Group, October 10, 1991, p.8; Department of the Navy, Office of the Deputy Chief of Naval Operations for Plans, Policy and Operations, *Stratplan 2010 Phase II, Final Report* (June 1992), V.I, pp.92-93, obtained through the Freedom of Information Act by the Greenpeace Nuclear

However, the recent statements are different in three important respects. First, the authoritativeness is heightened, by a presidential signature on a public document in the case of the National Strategy, and by a defense secretary's signature in the case of the Nuclear Posture Review. Second, ambiguity has been lessened and effectively removed about whether the United States maintains the option of a nuclear response to use of chemical and biological weapons as well as nuclear weapons, and the possibility of nuclear preemptive use has been given a higher profile. Third, the NPR's reference to "surprising military developments" significantly widened, at least theoretically, the circumstances for U.S. nuclear use.

Thus far from diminishing the role of nuclear weapons in security policies, as called for by the NPT 13 steps, the United States is expanding options for nuclear use. This point was illustrated chillingly this year by credible media reports that, until the Joint Chiefs of Staff insisted on their removal, U.S. civilian officials at the highest level wanted to keep nuclear use options in plans for counter-proliferation strikes on Iran.³³ During the Cold War, nuclear weapons were rationalized by the policy of mutually assured destruction, a policy paradoxically designed to ensure non-use. Now, there is a new emphasis on their war-fighting role. It is morally comprehensible, though not morally acceptable, certainly as a long-term policy, that nuclear weapons would be retained to prevent their use by another country. It is not morally intelligible to project the use of nuclear weapons in a wide range of circumstances, not limited to possible response to another country's nuclear use. Nor is it wise, because it may one day lead to the actual use of nuclear weapons, and because it enhances their political value, and therefore encourages their spread.

The United States should therefore reaffirm the assurances of non-use of nuclear weapons previously given to NPT states parties which have renounced the possession of nuclear arms, and support rather than oppose codification of the assurances in a treaty. The logic is unassailable; countries that have foresworn nuclear weapons are entitled to guarantees of non-use of the weapons against them. Furthermore, the United States should adopt a declared policy of no first use of nuclear weapons.

Free Seas program, 1994; United States Joint Chiefs of Staff, *Doctrine for Joint Theater Nuclear Operations*, Joint Pub 3-12.1 (February 1996), pp. viii, I-3; White House, Press Briefing by Robert Bell, April 11, 1996, cited in George Bunn, "The Legal Status of U.S. Negative Security Assurances to Non-Nuclear Weapon States," *The Nonproliferation Review* (Spring-Summer 1997) 1, at 11, fn. 116; Robert Bell, "Strategic Agreements and the CTB Treaty: Striking the Right Balance", 28 *Arms Control Today* (No. 1, January/February 1998) 3, at 6, 9; R. Jeffrey Smith, "Clinton Directive Changes Strategy On Nuclear Arms," *Washington Post*, December 7, 1997; Edward Warner III, Assistant Secretary of Defense (Strategy and Threat Reduction), prepared statement before the Strategic Forces Subcommittee, Senate Armed Services Committee, Hearing on Nuclear Deterrence, March 31, 1998, at 9, quoted in J. Medalia, "Nuclear Weapons Production Capability Issues," Congressional Research Service Report to Congress (June 1998), at CRS-14; Stephen I. Schwartz, "Miscalculated Ambiguity: US Policy on the Use and Threat of Use of Nuclear Weapons," *Disarmament Diplomacy* (February 1998, No. 23) 10, at 11, available at www.acronym.org.uk; "Nuclear Operations," Air Force Doctrine Document 2-1.5 (15 July 1998), at 8-9. The first three items are cited and discussed in Andrew Lichterman, *Western States Information Bulletin, Sliding Towards The Brink: More Useable Nuclear Weapons and the Dangerous Illusions of High-Tech War* (March 2003) 8-9, online at <http://wsifweb.org/docs/nucpreppdf.pdf>.

³³ Seymour Hersh, "The Iran Plans: Would President Bush go to war to stop Tehran from getting the bomb?" *The New Yorker*, April 17, 2006; Peter Baker, Dafna Linzer and Thomas E. Ricks, "U.S. Is Studying Military Strike Options on Iran: Any Mix of Tact, Threats Alarms Critics," *Washington Post*, April 9, 2006; Seymour Hersh, "Last Stand: The military's problem with the president's Iran policy," *The New Yorker*, July 10, 2006.

Conclusion: Disarmament as the compass point

Implementation of the above-outlined priority measures and the regime-management reforms outlined in the Appendix I should take place in the context of a visible intent to achieve a nuclear weapons-free world. The priority measures are valuable in and of themselves. They decrease risks of use, diminish the access of terrorists to catastrophic weapons and materials to build them, raise barriers to acquisition by additional states, and generate support for strengthening the nonproliferation side of the regime and resolving regional crises. Moreover, the measures pass key tests: they enhance security generally; they do not diminish the security of any state; they reinforce the NPT and enhance the rule of law; they make the world safer now; they move the world towards elimination of nuclear weapons.

To conclude: Building an effective nonproliferation/disarmament regime is complex and challenging. The underlying principle, however, is simple, and serves as a guide to the work. Nuclear weapons are morally, legally, and practically unacceptable. As my mentor, the late Senator Alan Cranston, used to say, “Nuclear weapons are unworthy of civilization.” Perpetual nuclear apartheid – some countries have the weapons, others are forbidden to have them – is unsustainable. Both practical and moral coherence requires application of a universal standard, a golden rule: no country may possess weapons capable of inflicting catastrophic, city-destroying or even civilization-ending, damage. If we meet the challenge of implementing this rule, we will pass down to our children and grandchildren and all succeeding generations a world preserving the advances made by hundreds of previous generations, including our own.

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Appendix A: Needed Nonproliferation Reforms

Experience since the Cold War with preventing proliferation, in particular with regard to North Korea and Iran, teaches three lessons about strengthening the regime for the future.

First, material and ongoing violations of safeguards reporting requirements should result in forfeiture of the right to acquire nuclear fuel production technology under Article IV of the NPT. The United States made this point in NPT meetings with respect to Iran, but it has never been squarely addressed by the IAEA Board of Governors, NPT states parties, or the Security Council.

Second, institutional reform is needed to create effective compliance assessment mechanisms. There is no body empowered to assess whether a state is breaching its NPT obligation by seeking to acquire nuclear weapons nor by failing to comply with the commitment to good faith negotiations on disarmament. Under its Statute, the IAEA has the important but limited task of ascertaining whether nuclear materials have been diverted to a weapons program, which it has *not* found to be the case in Iran. But there are other aspects to a weapons program, for example warhead design and missile development. What is needed is an NPT governing body which together with the IAEA, perhaps also drawing on UNMOVIC-type resources, has this responsibility, as well as the responsibility of monitoring reduction and elimination of existing arsenals. There have been multiple proposals to strengthen NPT institutional capability, by adding a secretariat, a governing council, and/or empowered annual meetings of states parties. The proposals have come from responsible states like Ireland and Canada and from the Weapons of Mass Destruction Commission,³⁴ and have been advanced as well by Jayantha Dhanapala, chair of the 1995 Review and Extension Conference and former UN Under Secretary-General for Disarmament Affairs.³⁵ So far the United States has shown no interest.

Third, policy tools work best when integrated into the global system. Effective nonproliferation and disarmament requires a robust multilateralism based upon global norms. This is not to say that policy tools involving international cooperation short of a global regime have no place. The tools include export control arrangements; the network of states (the Proliferation Security Initiative) prepared to interdict illicit shipments of nuclear, biological and chemical (NBC) weapon-related equipment, materials, and delivery systems; and the G-8 program building on the Cooperative Threat Reduction program aimed at securing NBC weapons and materials in Russia and other countries. But their effectiveness can be optimized by finding ways to link them to the global regime. An example of movement towards such integration is Security Council resolution 1540, which requires all states to take steps to prevent acquisition of and trafficking in NBC weapon-related items by states, terrorists and other non-state actors. Among other things, the resolution requires all states to appropriately regulate exports. It is a step toward universalizing nuclear weapons control by means of law established by the Security Council. The Bush administration is to be commended for its leadership in the solidification of global law through resolution 1540. But I must register two cautions. The first is that, as with other nonproliferation measures, the extent of compliance will depend crucially on how well the states possessing nuclear arsenals do in fulfilling their side of the bargain. The second is that given the limited membership of the Security Council and its control by the United States and other permanent members, all

³⁴ *Weapons of Terror* at 63-66.

³⁵ See Jayantha Dhanapala with Randy Rydell, *Multilateral Diplomacy and the NPT: An Insider's Account* (UNIDIR, 2005) 129-132.

possessing nuclear weapons, legitimacy and in-depth commitment will best be achieved by subsequent codification of 1540 and similar requirements in multilateral treaties.

Appendix B: Underlying Practical and Moral Concerns

“The unleashing of power of the atom bomb has changed everything except our mode of thinking, and thus we head toward unparalleled catastrophes.”

Albert Einstein

“If men can develop weapons that are so terrifying as to make the thought of global war include almost a sentence of suicide, you would think that man’s intelligence and his comprehension ... would include also his ability to find a peaceful solution.” *President Dwight D. Eisenhower*

We must and we can change our course for life is precious.

General George Lee Butler, former Commander-in-Chief of U.S. Strategic Air Command (1991-92) and U.S. Strategic Command (1992-94), was responsible for all nuclear forces of the American Air Force and Navy. His insights should be of paramount concern to all Members of Congress:

‘Despite all the evidence, we have yet to fully grasp the monstrous effect of these weapons, that the consequences of their use defy reason, transcending time and space, poisoning the Earth and deforming its inhabitants.’ Nuclear weapons are ‘inherently dangerous, hugely expensive and militarily inefficient.’

General Butler stated that “accepting nuclear weapons as the ultimate arbiter of conflict condemns the world to live under a dark cloud of perpetual anxiety. Worse, it codifies mankind’s most murderous instincts as an acceptable resort when other options for resolving conflict fail.” He added, ‘I have spent years studying nuclear weapons effects...have investigated a distressing array of accidents and incidents involving strategic weapons and forces... I came away from that experience deeply troubled by what I see as the burden of building and maintaining nuclear arsenals ... the grotesquely destructive war plans, the daily operational risks, and the constant prospect of a crisis that would hold the fate of entire societies at risk’³⁶

He stated his profound concern regarding how little high-level scrutiny (the U.S. nuclear war plan) had received over the years, and by how readily his military colleagues threw up

³⁶ CHARLES J. MOXLEY JR., NUCLEAR WEAPONS AND INTERNATIONAL LAW IN THE POST COLD WAR WORLD, 535 (footnote omitted) (reprinted from Otto Kreisher, *Retired Generals Urge End to Nuclear Arsenal*, THE SAN DIEGO UNION-TRIB., Dec.5, 1996, at A-1.); See, Jonathan Granoff, *Nuclear Weapons, Ethics, Morals, and Law*, Volume 2000 Number 4, Bringham Young University Law Review, 1417 (2000)

their hands and rolled their eyes at the grim challenge of converting mathematical estimates of the destructiveness of nuclear arms and the resilience of Soviet structures into dry statistical formulas for nuclear war. (reprinted from R. Jeffrey Smith, *Ex-Commander of Nukes Wants to Scrap Them, A Believer No More*, THE SACRAMENTO BEE, Mar. 29, 1998. See also R. Jeffrey Smith, *The Dissenter*, THE WASHINGTON POST, Dec. 7, 1997, at Magazine, W18.)

General Butler had a unique comprehension of how little the matter has been understood in the chambers of decision making:

“‘It was all Alice-in-Wonderland stuff,’ General Butler says. The targeting data and other details of the war plan, which are written in an almost unfathomable million lines of computer software code, were typically reduced by military briefers to between 60 and 100 slides that could be presented in an hour or so to the handful of senior U.S. officials who were cleared to hear it: ‘Generally, no one at the briefing wanted to ask questions because they didn’t want to embarrass themselves. It was about as unsatisfactory as could be imagined for that subject matter. The truth is that the President only had a superficial understanding’ of what would happen in a nuclear war, Butler says. Congress knew even less because no lawmaker has ever had access to the war plan, and most academics could only make ill-informed guesses.”³⁷

We remain in a state of incomplete comprehension largely because the magnitude of the destructive capacity of a nuclear bomb is simply too great to imagine. Moreover, the illogic of this improved means to an unimproved end challenges our fundamental concepts of what we are willing to do to millions of innocent people to protect our own creation, the State.

The UN in its 1991 report found the ‘(n)uclear weapons represent a historically new form of weaponry with unparalleled destructive potential. A single large nuclear weapon could release explosive power comparable to all the energy released from the conventional weapons used in all past wars.’³⁸

Experts have estimated that the total conventional bombs dropped by United States Air Force amounted to only two megatons for the entirety of WWII, the yield of one or two ordinary nuclear bombs today.³⁹

³⁷ See *id.* at n 27 (quoting R. Jeffery Smith, *Ex-Commander of Nukes Wants to Scrap Them, A Believer No More*, SACRAMENTO BEE, Mar. 9, 1998; see also R. Jeffrey Smith, *The Dissenter*, WASH. POST MAG., Dec. 7, 1997, at W18).

³⁸ MOXLEY, *supra* note 1, at 398 (quoting WORLD HEALTH ORGANIZATION, UNITED NATIONS, EFFECTS OF NUCLEAR WAR ON HEALTH AND HEALTH SERVICES 7 (2d ed. 1987); see also, UN DEPARTMENT FOR DISARMAMENT AFFAIRS, NUCLEAR WEAPONS: A COMPREHENSIVE STUDY 6, at 7, (1991).

³⁹ See Center for Defense Information, Nuclear War Quotations 39, (hereinafter NUCLEAR WAR QUOTATIONS) (quoting Ray S. Cline in WORLD POWER ASSESSMENT 58 (1975)).

What exactly does one nuclear bomb do? Former Director of Central Intelligence Stansfield Turner offers his brief description:

The fireball created by a nuclear explosion will be much hotter than the surface of the sun for fractions of a second and will radiate light and heat, as do all objects of very high temperature. Because the fireball is so hot and close to the earth, it will deliver enormous amounts of heat and light to the terrain surrounding the detonation point, and it will be hundreds or thousands of times brighter than the sun at noon. If the fireball is created by the detonation of a 1-MT (megaton) nuclear weapon, for example, within roughly eight- to nine-tenths of a second each section of its surface will be radiating about three times as much heat and light as a comparable area of the sun itself. The intense flash of light and heat from the explosion of a 550-KT weapon can carbonize exposed skin and cause clothing to ignite. At a range of three miles surfaces would fulminate and recoil as they emanate flames. Particles of sand would explode like pieces of popcorn from the rapid heating of the fireball. At 3.5 miles, where the blast pressure would be 5psi, the fireball could ignite clothing on people, curtains and upholstery in homes and offices, and rubber tires on cars. At four miles, it could blister aluminum surfaces, and at six to seven miles it could still set fire to dry leaves and grass. This flash of incredibly intense, nuclear-driven sunlight could simultaneously set an uncountable number of fires over an area of close to 100 square miles.⁴⁰

What is the destructive effect of this blast? In his landmark opinion for the International Court of Justice, Judge Christopher Weeramantry made a short list:

Nuclear weapons

1. cause death and destruction; induced cancers, leukemia, keloids and related afflictions;
2. cause gastrointestinal, cardiovascular and related afflictions; continued for decades after their use to induce the health related problems mentioned above;
3. damage the environmental rights of future generations;
4. cause congenital deformities, mental retardation and genetic damage;
5. carry the potential to cause a nuclear winter;
6. contaminate and destroy the food chain;
7. imperil the eco-system;
8. produce lethal levels of heat and blast;
9. produce radiation and radioactive fallout;
10. produce a disruptive electromagnetic pulse;
11. produce social disintegration;
12. imperil all civilizations;
13. threaten human survival;
14. wreak cultural devastation;
15. span a time range of thousands of years;
16. threaten all life on the planet;
17. irreversibly damage the rights of future generations;

⁴⁰ STANSFIELD TURNER, CAGING THE NUCLEAR GENIE , app. A 127-128 (1997).

18. exterminate civilian population;
19. damage neighboring states;
20. produce psychological stress and fear syndromes--as no other weapons do.⁴¹

What does this mean in terms of human experience? Please read this bearing in mind that the current arsenals represent nearly one million times the horror that overtook Hiroshima. Takashi Hiroaka, Mayor of Hiroshima testified before the International Court of Justice:

‘The atomic bombs dropped on Hiroshima and Nagasaki shattered all war precedent. The mind-numbing damage these nuclear weapons wrought shook the foundations of human existence...

The dropping of the nuclear weapons is a problem that must be addressed globally. History is written by the victors. Thus, the heinous massacre that was Hiroshima has been handed down to us as a perfectly justified act of war. As a result, for over 50 years we have never directly confronted the full implications of this horrifying act for the future of the human race. Hence, we are still forced to live under the enormous threat of nuclear weapons...

Beneath the atomic bomb’s monstrous mushroom cloud, human skin was burned raw. Crying for water, human beings died in desperate agony. With thoughts of these victims as the starting point, it is incumbent upon us to think about the nuclear age and the relationship between human beings and nuclear weapons...

The unique characteristic of the atomic bombing was that the enormous destruction was instantaneous and universal. Old, young, male, female, soldier, civilian – the killing was utterly indiscriminate. The entire city was exposed to the compound and devastating effects of thermal rays, shock wave blast, and radiation...

Above all, we must focus on the fact that the human misery caused by the atomic bomb is different from that caused by conventional weapons. (H)uman bodies were burned by the thermal rays and high-temperature fires, broken and lacerated by the blast, and insidiously attacked by radiation. These forms of damage compounded and amplified each other, and the name given to the combination was “A-bomb disease...”

(T)he bomb reduced Hiroshima to an inhuman state utterly beyond human ability to express or imagine. I feel frustrated at not being able to express this completely in my testimony about the tragedy of the atomic bombing...

It is clear that the use of nuclear weapons, which cause indiscriminate mass murder that leaves survivors to suffer for decades, is a violation of international law.”⁴²

⁴¹ Threat or Use of Nuclear Weapons, 1996 I.C.J. at 454 (separate opinion of Judge Weeramantry)

⁴² JOHN BURROUGHS, THE (IL)LEGALITY OF THE THREAT OR USE OF NUCLEAR WEAPONS, 90-91(1997); see also, DOUGLAS ROCHE, BEYOND HIROSHIMA (2005), THE ULTIMATE EVIL (1997), and AN UNACCEPTABLE RISK (1995) for thorough expositions of the relationship between the threat of nuclear weapons and international legal and diplomatic affairs.

During the Cold War the deployment of the arsenals of the Soviet Union and the US were designed to ensure nonuse. Not only does it seem that nuclear weapons challenge our capacity of using law and morality to guide our conduct but also reason as well. We have built a device which renders us less secure the more we perfect its effectiveness. Thus, George Kennan, a key figure in developing the architecture of the Cold War said about nuclear weapons:

:

“The readiness to use nuclear weapons against other human beings – against people we do not know, whom we have never seen, and whose guilt or innocence is not for us to establish – and, in doing so, to place in jeopardy the natural structure upon which all civilization rests, as though the safety and perceived interests of our own generation were more important than everything that has taken place or could take place in civilization: this is nothing less than a presumption, a blasphemy, an indignity – an indignity of monstrous dimensions – offered to God!”⁴³

The perverse logic of the Cold War based on having enough destructive capacity at the ready to make a use unthinkable makes no sense at all today. The hair trigger deployments of thousands of warheads between Russia and US renders logic impotent since we are not even enemies. Yet, as if we were acting rationally, we keep these arsenals precisely calibrated and well organized thus efficiently risking the destruction of all human life on the planet.

I would now like to offer a simple legal test that the National Academy has given to these devices followed by the relevant excerpts from statements of recent years of the Nobel Peace Laureates who have gathered at a Summit in Rome, Italy and then close with the entire most recent Nobel Peace Laureates Statement from Gwangju, Korea of June 2006.⁴⁴

My hope is to instill a greater sense of the moral aspect of this issue into our public discourse. At root we are addressing whether this use of the gift of science and technology solves any problem as great as the problem this use has created. I would contend that practically, legally, morally, and militarily it has not. Thus the argument to set the compass point toward abolition is well founded.

The Committee on International Security and Arms Control of the U.S. National Academy of Sciences succinctly summed up the legal analysis of the current posture of international law:

“(T)he International Court of Justice agreed that the threat or use of nuclear weapons is strictly limited by generally accepted laws and humanitarian principles that restrict the use of force. Accordingly, any threat or use of nuclear weapons must be limited to , and necessary for, self-defense; it must not be targeted at civilians, and be capable of distinguishing between civilian and military targets; and it must not cause unnecessary suffering to combatants, or harm greater than

⁴³ GEORGE F. KENNAN, THE NUCLEAR DELUSION 206-207 (1982).

⁴⁴ Report on Nobel Laureate organization the International Peace Bureau delegations to the Nobel Peace Laureate Summits lists the Laureate participants and the statements in full, <http://www.gsinsstitute.org/docs/IPB_NobelSummitReports.pdf>; see also the official web site of the Summits at <<http://www.nobelpeace-summit.org>>

that unavoidable to achieve military objectives. In the Committee's view, the inherent destructiveness of nuclear weapons, combined with the unavoidable risk that even the most restricted use of such weapons would escalate to broader attacks, makes it extremely unlikely that any contemplated threat or use of nuclear weapons would meet such criteria.”⁴⁵

Judge Ranjeva, of the ICJ, stated what should be axiomatic in addressing world threats, and by that I mean, threats that impact on not just United States' interests but the entire planet and generations yet unborn:

“On the great issues of mankind the requirements of positive law and ethics make common cause, and nuclear weapons, because of their destructive effects, are one such issue.”⁴⁶

In a world with many different religions and cultures there are few places where we can look for an expression of global ethical principles and norms. Many would agree that the Nobel Peace Laureates are a sufficiently distinguished group whose opinions should not be lightly ignored. Below are several quotes from Summits of this distinguished group on the subject of nuclear weapons.

From the 2005 Rome Final Statement:

While expressing regret that some African nations spend too much on conventional weapons, we commend the entire African continent for becoming a nuclear weapons free zone. It is absurd that the nations with nuclear weapons refuse even to pledge not to use nuclear weapons against all nuclear weapons free nations.

As in past years, we reiterate our insistence that the existence of nuclear weapons is morally unacceptable and condemn military doctrines allowing their use. We demand progress by the nuclear weapons states in fulfilling their disarmament obligations under the Nuclear Non-Proliferation Treaty. The corrosion of the non-proliferation regime is a danger to world peace.

From the 2004 Rome Final Statement:

Preserving and strengthening the Nuclear Non-Proliferation Treaty. We reject double standards and emphasize the legal responsibility of nuclear weapons states to work to eliminate nuclear weapons. We call for continuation of the moratorium on nuclear testing pending entry into force of the Comprehensive Test Ban Treaty, and for accelerating the process of verifiable and irreversible nuclear arms reduction. We are gravely alarmed by the creation of new, usable nuclear weapons and call for rejection of doctrines that view nuclear weapons as legitimate means of war-fighting and threat pre-emption.

From 2003 Rome Final Statement:

⁴⁵ JOHN BURROUGHS, THE LEGAL FRAMEWORK FOR NON-USE AND ELIMINATION OF NUCLEAR WEAPONS, quoted at p. 6 (2006), <<http://www.lcnpp.org/disarmament/Gpeacebrfpaper.pdf>>

⁴⁶ Threat or Use of Nuclear Weapons 1996 ICJ 296 (separate opinion of Judge Ranjeva).

The threat of weapons of mass destruction remains with us. We call for an immediate end to the newly resurgent arms race, which is being fueled by a failure to universally ratify a treaty banning nuclear testing, and by doctrines that lower the threshold of use and promote the creation of new nuclear weapons. This is particularly dangerous when coupled with the doctrine of pre-emption.

For some to say that nuclear weapons are good for them but not for others is simply not sustainable. The failure of the nuclear weapons states to abide by their legal pledge to negotiate the elimination of nuclear weapon, contained in the Nuclear Non-Proliferation Treaty, is the greatest stimulus to their proliferation.

Nuclear weapons are immoral and we call for their universal legal prohibition. They must be eliminated before they eliminate humanity.

For a list of the Nobel Peace Laureates who have endorsed these strong statements, please go to <http://www.nobelpeace-summit.org/index-en.asp>

And most recently the following was issued at the Summit in Gwangju, Korea, which is quoted here in its entirety because of its relevance to the Korean issue:

Gwangju Final Declaration 2006

In Gwangju, the birthplace of modern Korean democracy, we, the Nobel Peace laureates, have reaffirmed our historical responsibility and the hope of human kind to achieve democracy and peace on the Korean Peninsula and the whole world. "The 2006 Gwangju Summit of Nobel Peace Laureates" was held to remember the May 18 Democratic Movement that spurred the democratization of Korea in 1980, and to uphold the spirit of the June 15 South–North Joint Declaration that opened up the way for peace on the Korean Peninsula in 2000. We have gathered in the spirit of the two global events that have occurred on the Korean Peninsula. We will search for, and promote, stable ways to bring lasting peace on the Peninsula and to spread democracy in East Asia. The Summit started from the universal insight discovered over the course of human history that democracy and human rights bring peace; and peace in turn strengthens democracy and human rights. This is not only the spirit of the Nobel Peace Prize but also the purpose of life and the course of action for the Nobel Peace laureates.

The shadows of the Cold War still linger on the Korean Peninsula and the tension and confrontation have become a huge threat to the peace and democracy of not only the Peninsula and East Asia but also the world as a whole. Meanwhile, there are still many places in Asia where democracy has not yet developed and human rights are being jeopardized. This shows us that trees of democracy and peace do not grow easily and that without endless efforts these trees will not grow and sometimes even wither. In this respect, the historical responsibility and common action of the Nobel Peace laureates are all the more crucial. Based upon our strong friendship and common philosophy, we will go to areas where democracy and peace are under threat, wherever that may be, and do our best to fulfill our role and responsibility.

Our practical actions aspire to affirm universal shared values such as compassion, love, justice,

forgiveness and generosity.

Based on such goal and philosophy, we, the Nobel Peace laureates, pledge and propose the following:

Global Issues

- 1. All countries around the world must endlessly strive to further develop democracy and peace, and this must be pursued not by use of force or violence but through peaceful means such as non-violence, forgiveness and reconciliation.*
- 2. There are still many areas not only in Asia but in all parts of the world where democracy and human rights are under oppression. International cooperation, and multilateralism based on the rule of law must be strengthened. Not only political human rights, but also the more basic social human rights such as the right to eat, to receive medical treatment, to be educated and to live in peace must be achieved.*
- 3. Without rooting out poverty we cannot expect development in democracy and human rights, nor can we end terrorism and war. Along with humanitarian emergency aid, the international community needs long-term efforts to reduce poverty and bring sustainable economic development. We urge the G8 leaders meeting in St Petersburg on July 15th to fulfill the Millennium Development Goals for Africa and its peoples, especially through debt cancellation.*
- 4. To ensure a sustainable future we call for: a. Recognition and full implementation of women's rights and the full implementation of Security Council Resolution 1325 on women's role in the peace process; b. Promotion of a culture of peace where security is defined to always focus on meeting human needs with substantial reductions in military spending thus freeing up enormous resources; c. Recognition in action not just rhetoric that without a healthy environment the human community cannot survive; d. Enhancing cooperation amongst people in addressing our collective needs through rendering the institution of war as obsolete as apartheid, slavery and colonization.*
- 5. For the resolution to international disputes and for world peace, the active role of the United Nations must be respected. All countries should do their utmost to closely cooperate with the UN to resolve current global disputes and promote democracy through peaceful diplomatic measures.*

Korean Issues

- 1. The May 18 Democratic Movement and the signing of the June 15 South-North Joint Declaration were historic events contributing to democracy and peace not only on the Korean Peninsula but in Asia and the whole world. We, the Nobel Peace laureates, will do our best to uphold the vision and philosophy of both events.*
- 2. The Korean Peninsula remains the only place on earth where the darkest shadows of the Cold War still linger. We call for more active cooperation and efforts of the two Koreas, and also the concerned nations such as the United States, Japan, China and Russia, and international organizations such as the United Nations to pursue inter-Korean reconciliation and cooperation and end the state of war on the Peninsula to bring lasting peace in the region. As a modest step to enhance such cooperation, we advocate conversion*

of the DMZ into a de-mined Peace Park, an environmental reserve for the benefit of all people.

3. *The tension and confrontation surrounding the North Korean nuclear issue must be resolved. We urge all parties to resume the Six Party Talks in the spirit of mutual respect and equality. In order to advance this important process, we expect that the DPRK will completely abandon its nuclear weapons policy and accept international inspections. We also call for the US to end financial and economic sanctions on the DPRK and offer security guarantees. All parties should avoid any further obstacles to progress. All parties should fully implement the "Beijing Joint Statement" of September 19, 2005. The Six Parties should cooperate to ensure safe, peaceful energy security for the DPRK and implement economic cooperation in the fields of energy, trade and investment, bilaterally and multilaterally. We urge the United Nations and all nations involved to pursue inter-Korean reconciliation and cooperation and end the state of war on the Peninsula to bring lasting peace in the region.*
4. *We propose that the six-party talks should not be a temporary meeting to resolve the North Korean nuclear issue and bring lasting peace on the Peninsula but be developed into a permanent multilateral organization to promote peace and democracy on the Korean Peninsula.*

Nuclear weapons

1. *If we are to have stability we must have justice. This means the same rules apply to all. Where this principle is violated disaster is risked. In this regard we point to the failure of the nuclear weapons states to fulfill their bargain contained in the Nuclear Nonproliferation Treaty to negotiate the universal elimination of nuclear weapons. To pursue a nuclear-weapons-free Korean Peninsula or Middle East or South Asia, without credible commitment to universal nuclear disarmament is akin to a parent trying to persuade his teenagers not to smoke while puffing on a cigar. There are steps available to make progress in this area and they include:*
 - a. *Completing a treaty with full verification mechanisms cutting off further production of highly enriched uranium or plutonium for weapons purposes;*
 - b. *Universal ratification of the Comprehensive Test Ban Treaty, now ratified by 176 nations;*
 - c. *Taking the arsenals of Russia and the US off of hair trigger, launch on warning high alert;*
 - d. *Legally confirmed pledges by all states with nuclear weapons never to use them first;*
 - e. *Making cuts in the US and Russia's arsenal irreversible and verifiable.**(Italics added)*

* * *

We, the Nobel Peace laureates, pledge to pursue joint efforts and strengthen cooperation for the development of democracy, peace and human rights on the Korean Peninsula and the world as a whole.—June 17, 2006, At the closing of the "2006 Gwangju Summit of Nobel Peace Laureates"

- *Mikhail Gorbachev, Nobel Peace Laureate 1990*

- *Kim Dae-jung, Nobel Peace Laureate 2000*
- *Mairead Corrigan Maguire, Nobel Peace Laureate 1976*
- *Shirin Ebadi, Nobel Peace Laureate 2003*
- *Wangari Muta Maathai, Nobel Peace Laureate 2004*
- *International Peace Bureau (IPB), Organization awarded Nobel Peace Prize 1910*
- *American Friends Service Committee (AFSC), Organization awarded Nobel Peace Prize 1947*
- *Amnesty International (AI), Organization awarded Nobel Peace Prize 1977*
- *International Physicians for the Prevention of Nuclear War (IPPNW), Organization awarded Nobel Peace Prize 1985*
- *Pugwash Conferences on Science and World Affairs, Organization awarded Nobel Peace Prize 1995*
